1. **Establish an international consortium to identify and discuss best practices in STEM education.**

The first goal of the (name of grant project here) is to establish an international STEM consortium comprised of institutions of higher education; consultants in business, technology and related areas of the private sector; and stakeholders in Pre-K through secondary education. The goal of forming such a consortium is to develop a synergistic relationship among stakeholders for the identification, creation and dissemination of best practices in the areas of science, technology, engineering and mathematics.

The definition of a consortium “may be an alliance of people, groups, or organizations that have joined together to offer practical solutions to. . .common problems and challenges. . .” (Pennington & Williams, 2002, p. 4). They add (p. 4), “Each consortium is unique, but the broad goals of almost every consortium are to ‘achieve more, do something better, or reduce the costs of activity (Neal, 1988, p. 3)’.”

Further, Pennington and Williams (2004), offer eight potential benefits to forming consortia:

1. The ability to attract a larger number of people and perspectives into the problem solving process.
2. Higher quality solutions are possible.
3. Each stakeholder is ensured a voice and all parties are more likely to retain ownership of the solution.
4. General relationships between stakeholders are likely to improve, and coordination of future action becomes more likely.
5. Member institutions may be able to leverage their limited assets while seeking grants and other funding opportunities.
6. There are enhanced opportunities for professional development activities.
7. Cost savings may be available through joint purchases and sharing equipment and facilities.
8. The political clout of small rural institutions can be greatly increased. (pp. 4-5)

Additionally, Ravitch and Tillman (2010) suggest that cross-cultural alliances build a cooperative system that is internally accountable in that individuals and member organizations look to the common good of the shared outcomes.

Built into this project will be all the necessary components outlined by Pennington and Williams. The project will involve a diversity of stakeholders worldwide working together at a greatly diminished cost to create high quality solutions in the implementation of STEM curricula throughout the education process.

The (project name) consortium will solicit potential partnerships in countries that outpaced the United States on the 2007 Trends in International Mathematics and Science Study (TIMSS) sponsored by the International Association for the Evaluation of Educational Achievement (IEA), and the 2009 Program for International Student Assessment (PISA) by the Organization for Economic Cooperation and Development. Member countries currently under consideration include Japan, consistently ranked highly in both studies; Finland, identified among the top European performers in the PISA study; and China and the United Kingdom, representing the best of both Europe and Asia in the TIMSS.

Members of the PBI grant writing team are actively networking with internationally located colleagues to form the higher education component of the partnership. They also maintain contacts with STEM-related representatives of such private sector organizations as Google and government entities, including the National Aeronautics and Space Administration (NASA). Also integral to the success of the project are the identification and involvement of the member countries’ pre-school through secondary level educational institutions.

Among the primary objectives of the (project name) consortium are:

* the sharing and discussion of STEM best practices among colleagues via Skype and similar live-capture technologies;
* consistent and close consultation with and collaboration between educational and non-educational members, such as Google and NASA, to ensure that the consortium’s identified best practices in STEM are indeed viable practices with real-world application;
* the use of streaming video and the exchange of pre-recorded “best practices” videos to be maintained in a central repository for use by all members;
* activities such as “quad blogging” by undergraduate students with their counterparts in other member countries;
* interaction between/among higher education partners and teacher candidates to discuss STEM pedagogy;
* the monitoring and implementation of the most current and emerging technologies for providing a climate of rich, vigorous participation, whether synchronously or asynchronously; and
* sharing responsibility for adapting identified best practices to the unique needs, considerations of cultural diversity, and available resources of the international membership.

By forming an international consortium for STEM best practices, The University of West Alabama, a rural university, will bring together some of the world’s best minds to share their expertise in successfully identifying best practices in science, technology, engineering and mathematics education and creating the most efficient, effective and meaningful delivery of the STEM curricula to its partner schools across the world.

References

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